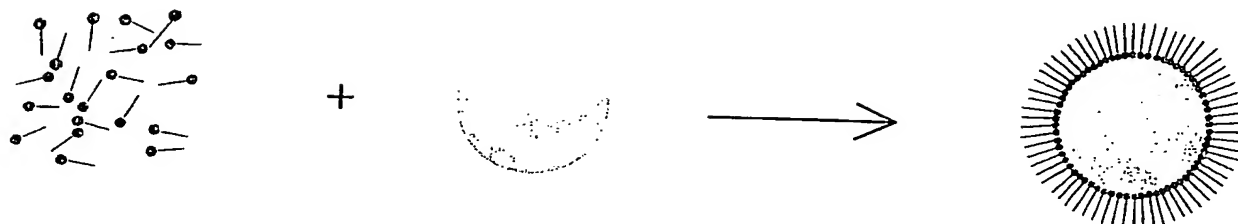
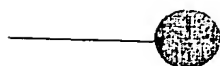


Figure 1



Key:

Alkythiol Oligonucleotide

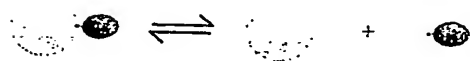


Gold Nanoparticle



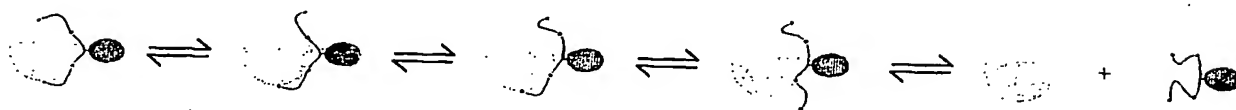
Figure 2

A) Dissociation of a monovalent NPC



$$K_d = \frac{[\text{Protein}][\text{Nucleosome}]}{[\text{Protein-Nucleosome}]}$$

B) Dissociation of a multivalent NPC

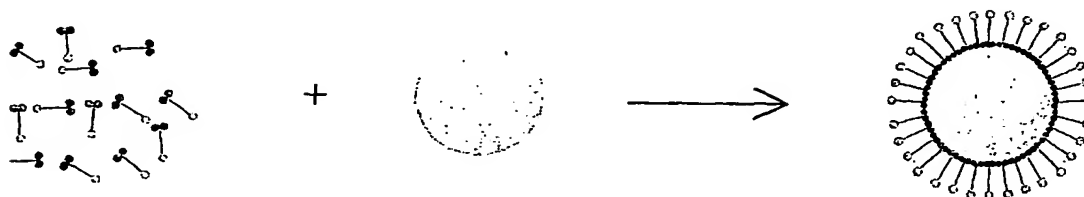


$$K_t = \frac{[\text{Protein}][\text{Nucleosome}]}{[\text{Protein-Nucleosome}][\text{Protein-Nucleosome}][\text{Protein-Nucleosome}][\text{Protein-Nucleosome}]}$$

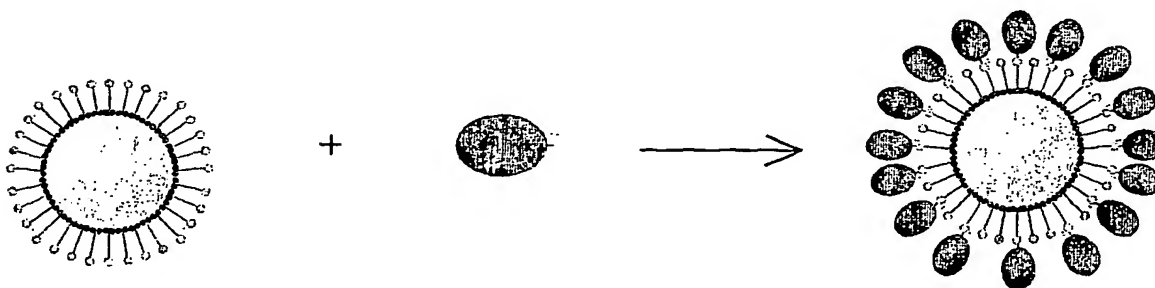
Where $K_t \ll K_d$

Figure 3

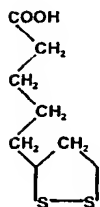
A) Divalent conjugation



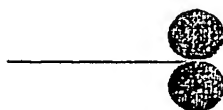
B) Covalent attachment of binding molecules



Key:



=



Avidin



Gold Nanoparticle



Figure 4

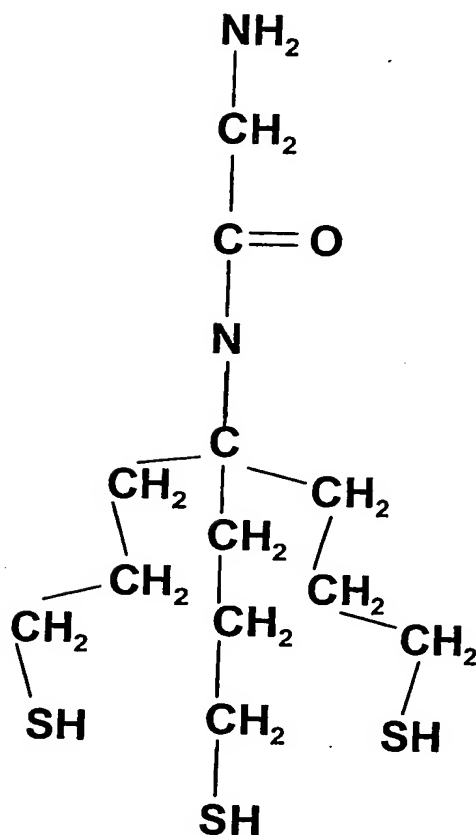
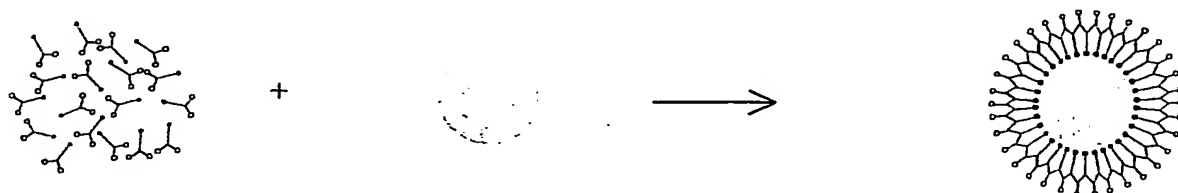
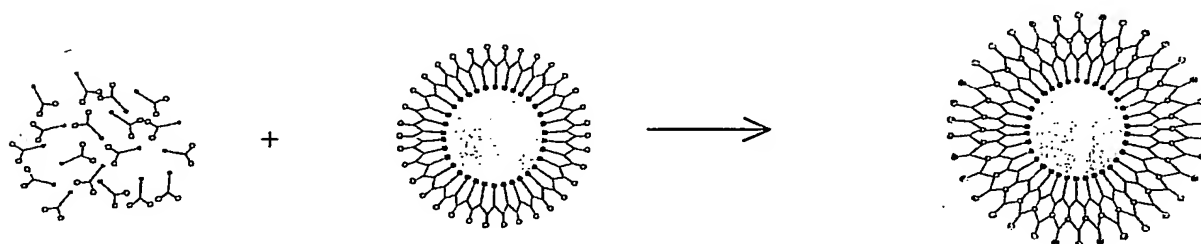


Figure 5

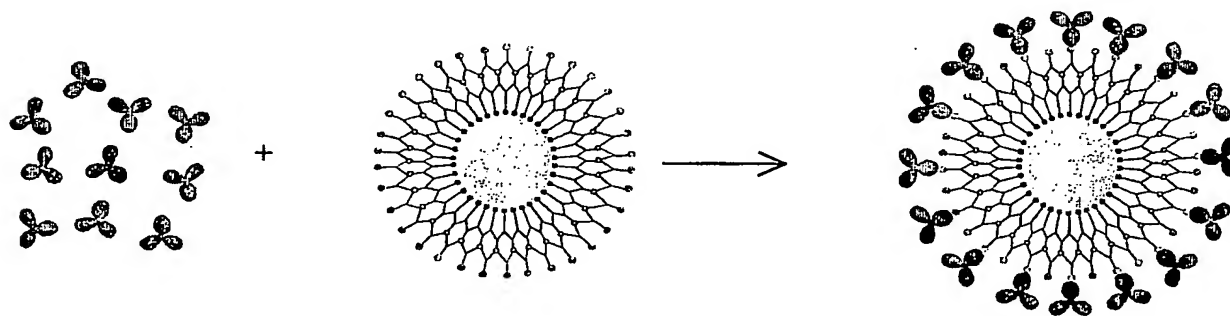
A) Monovalent conjugation



B) Polymerization (entrapment) and functionalization



C) Covalent attachment of binding molecules



Key:

Mercaptopropyltrimethoxy Silane

Aminopropyltrimethoxy Silane

Gold Nanoparticle

Antibody

Figure 6

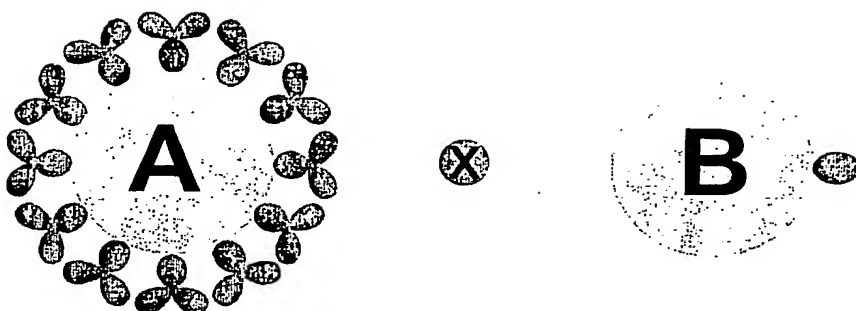


Figure 7

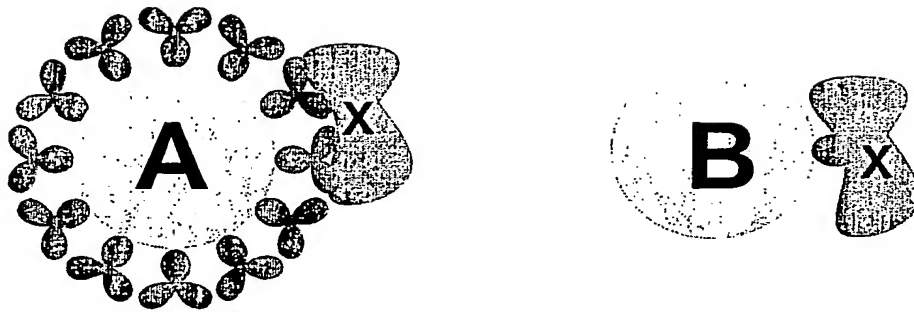


Figure 8

Separation Phase

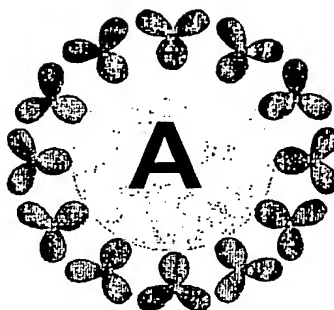


Figure 9

Separation Phase

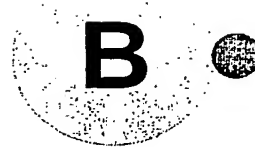
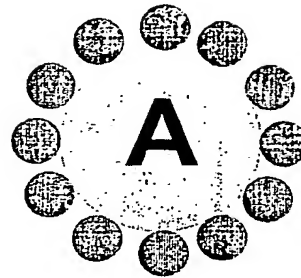
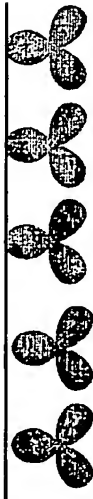
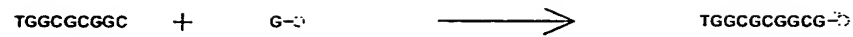
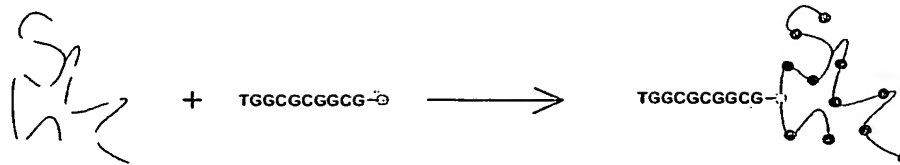


Figure 10

1) Activation



2) Substitution



3) Self Assembly

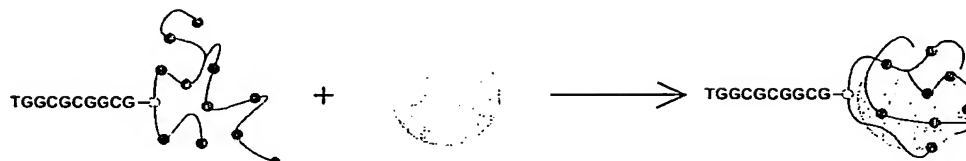


Figure 11

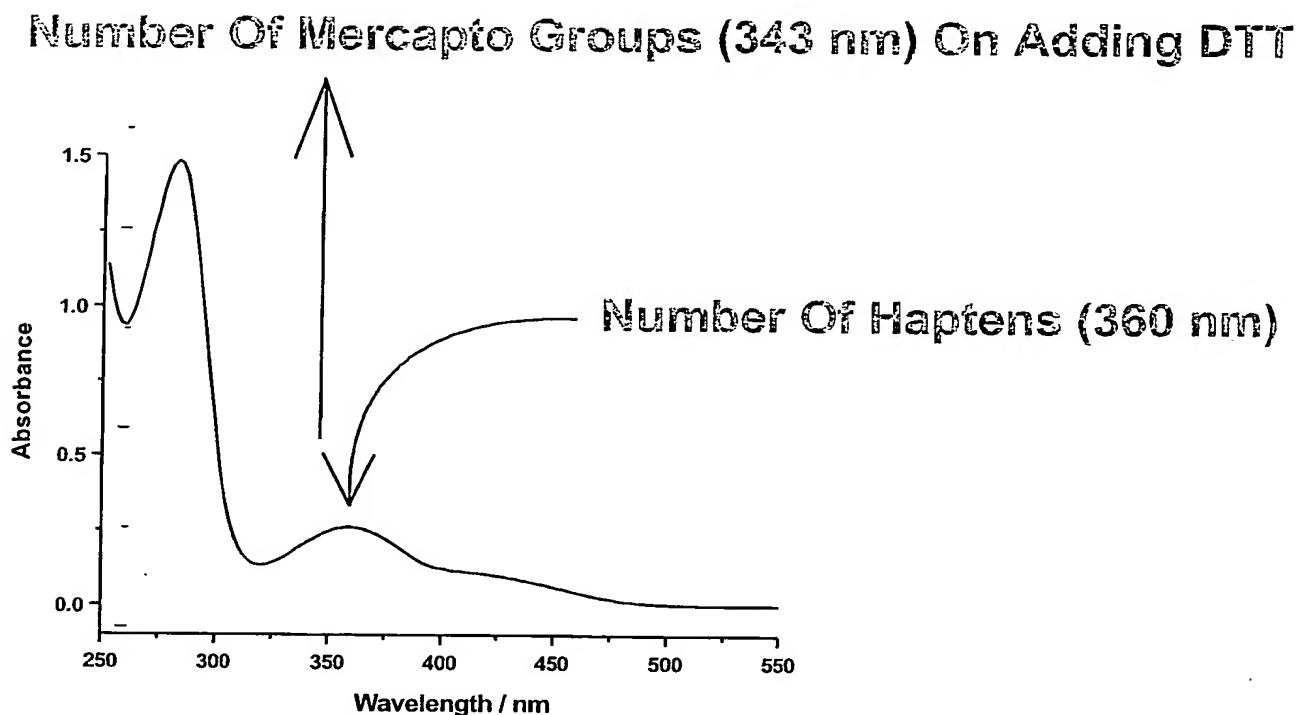


Figure 12

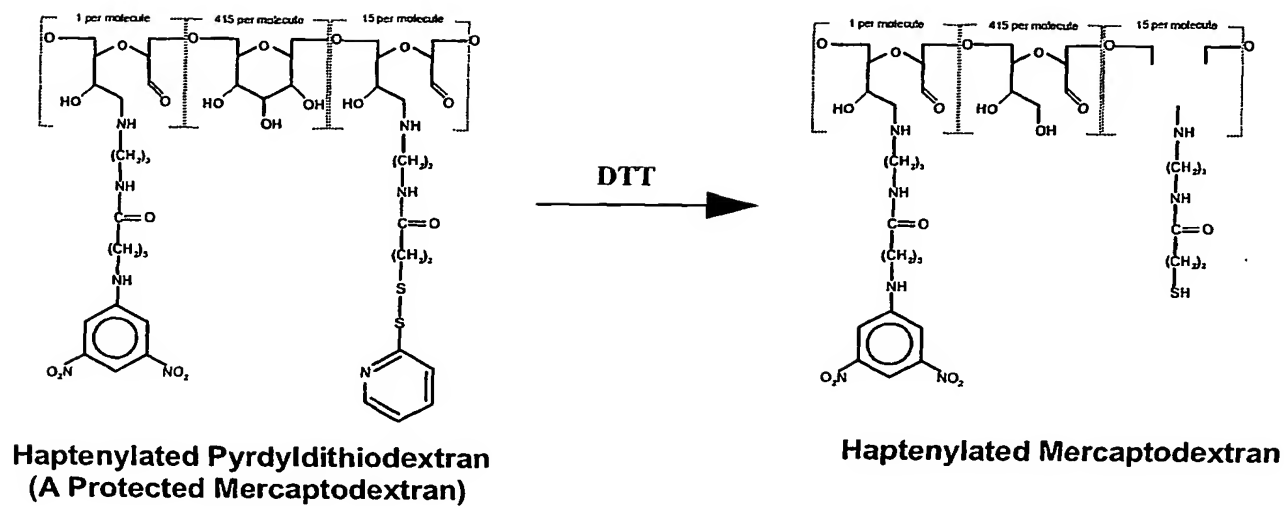


Figure 13

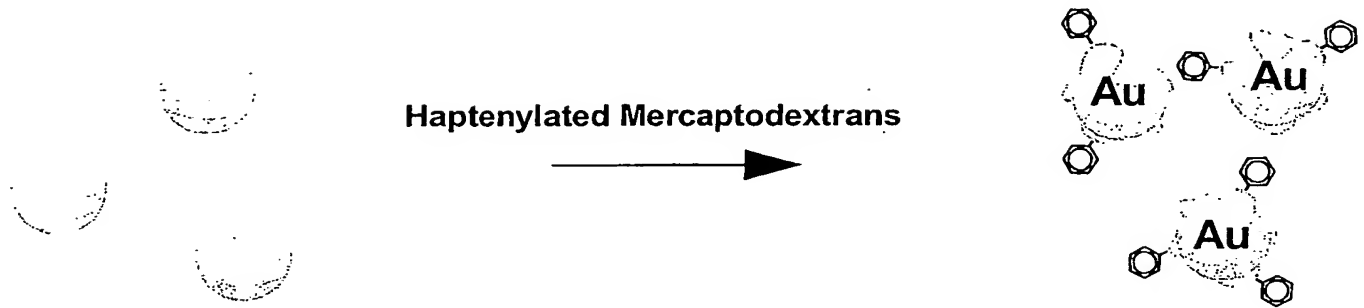


Figure 14

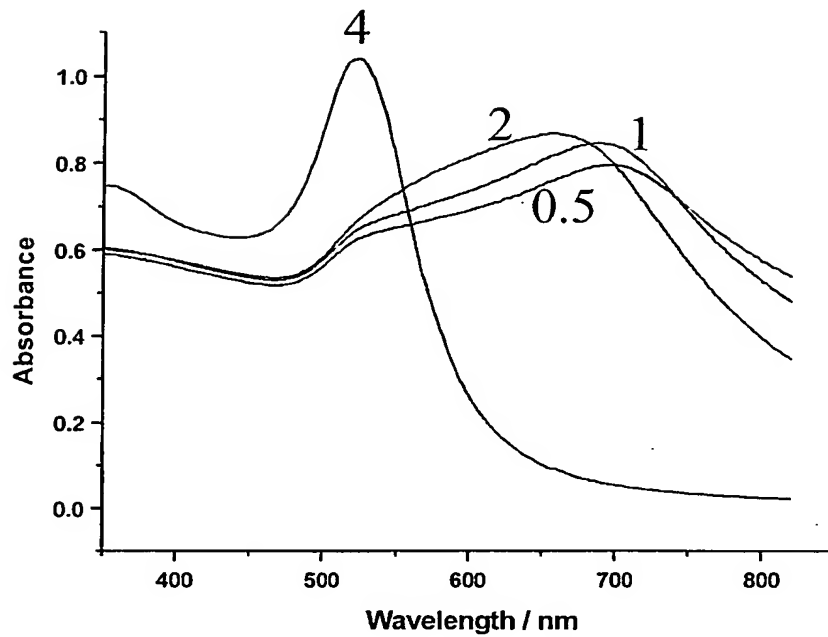


Figure 15

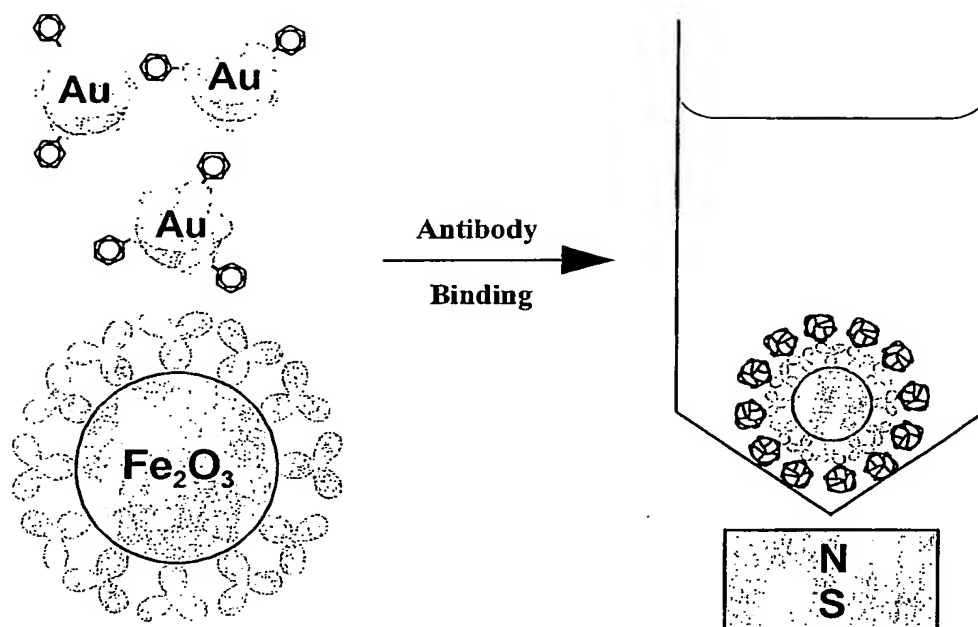


Figure 16

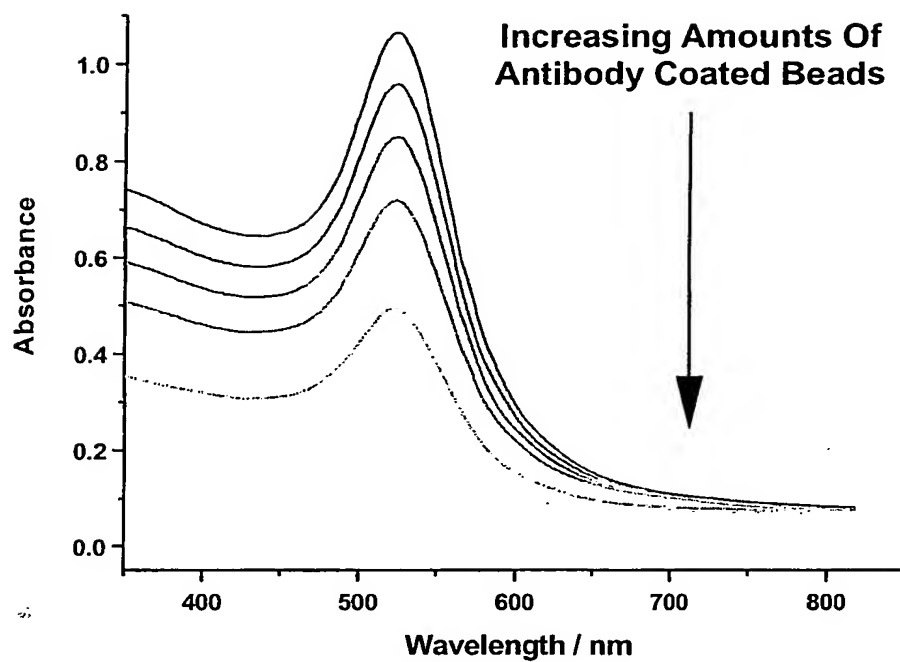


Figure 17

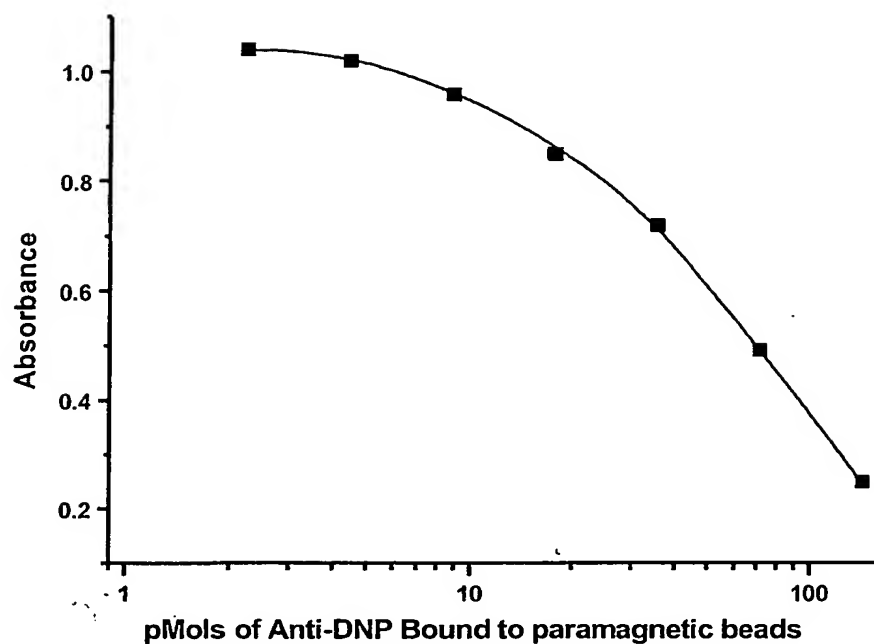


Figure 18

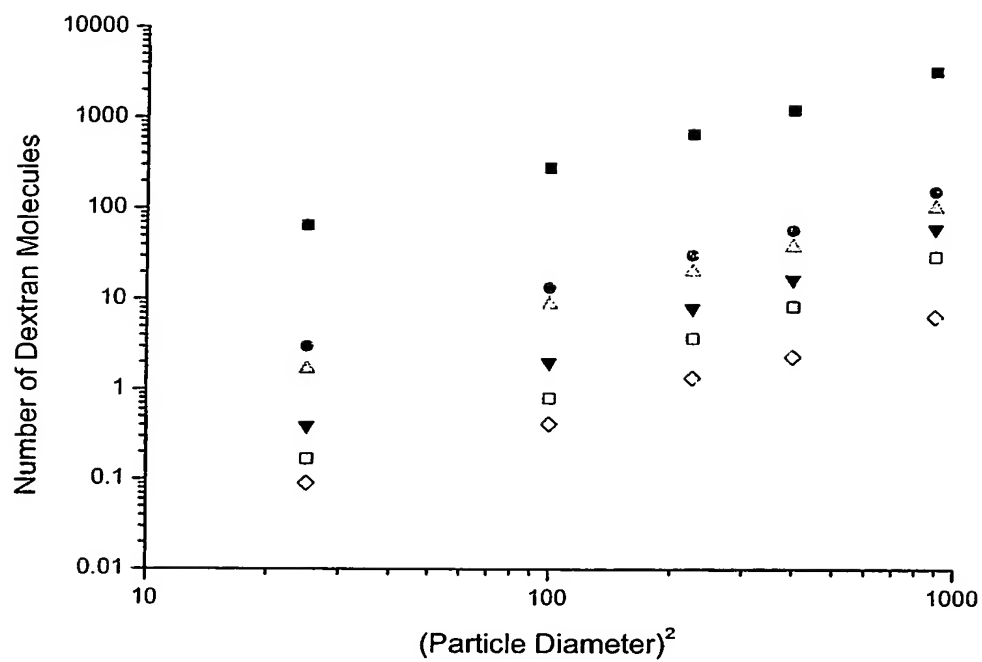


Figure 19

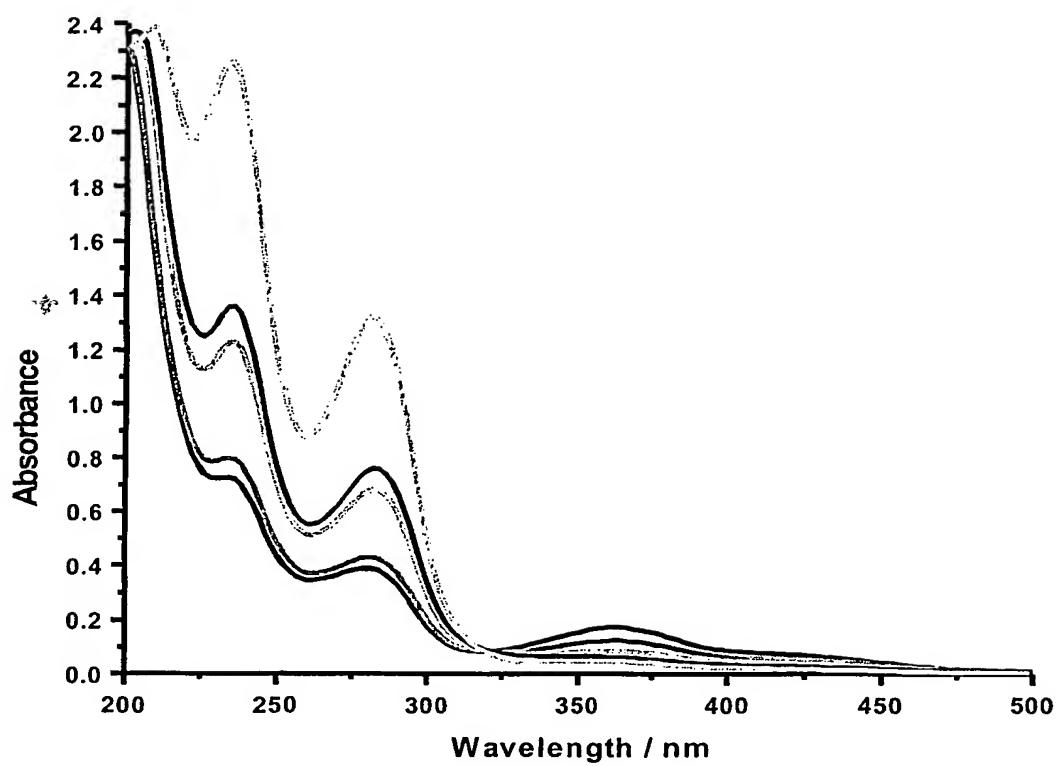


Figure 20

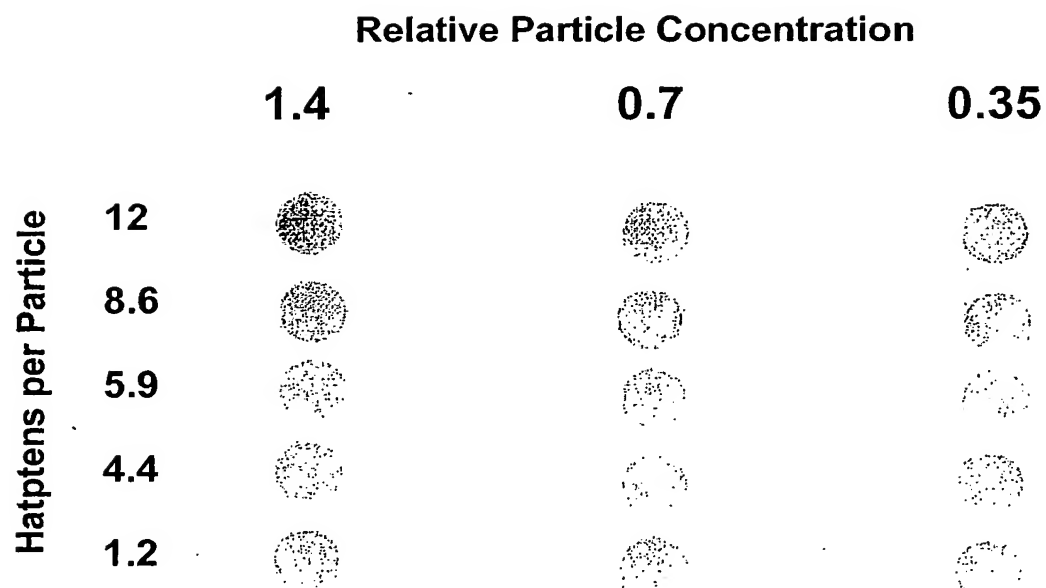


Figure 21

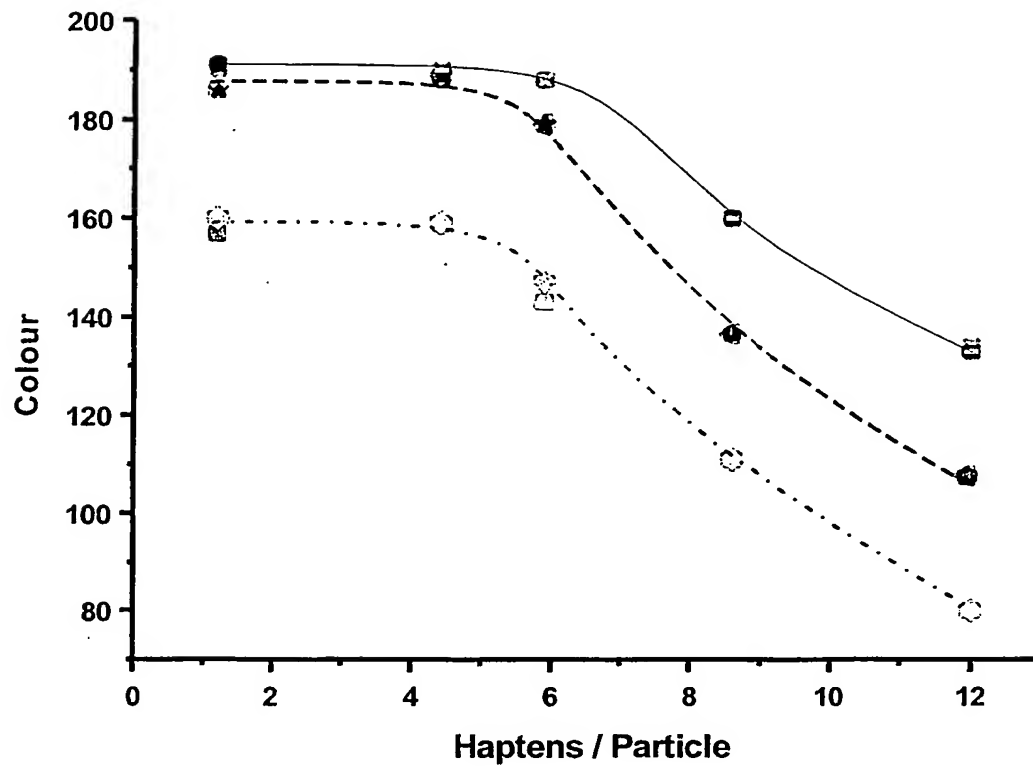
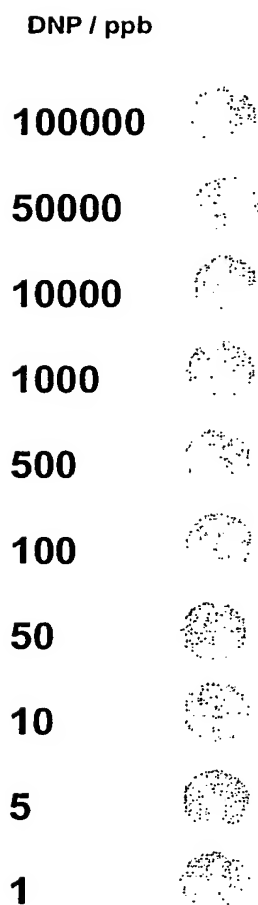


Figure 22



Rec'd PCT/PTO 31 MAY 2005

Figure 23

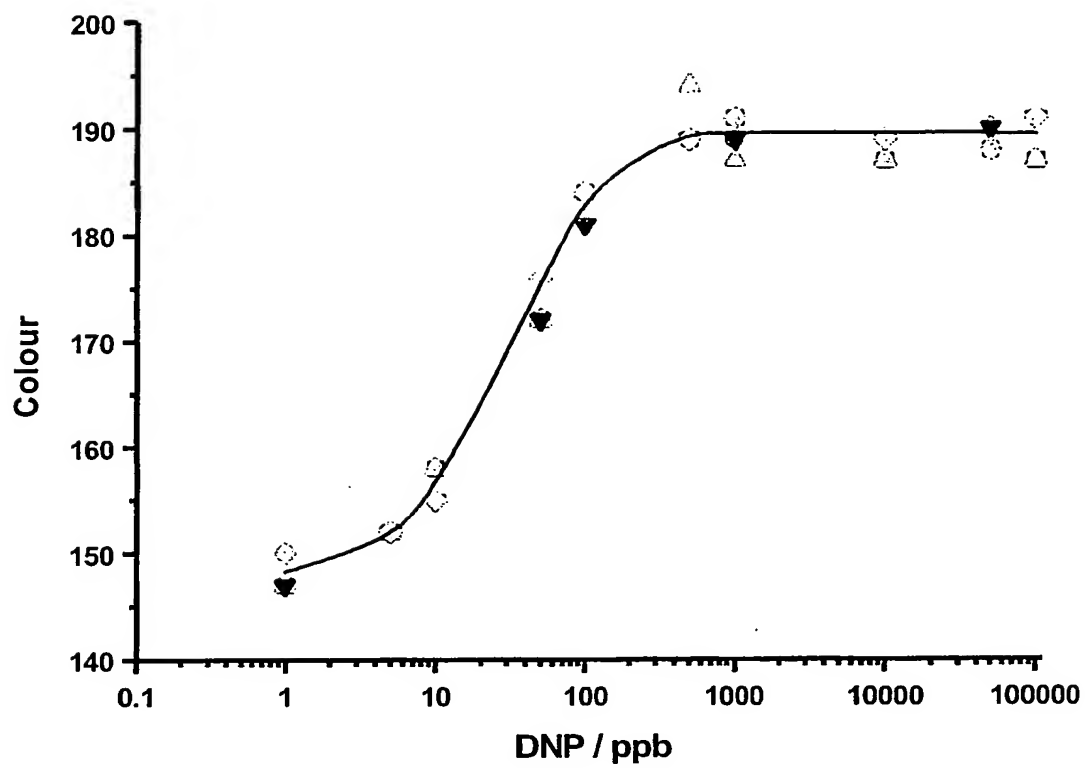
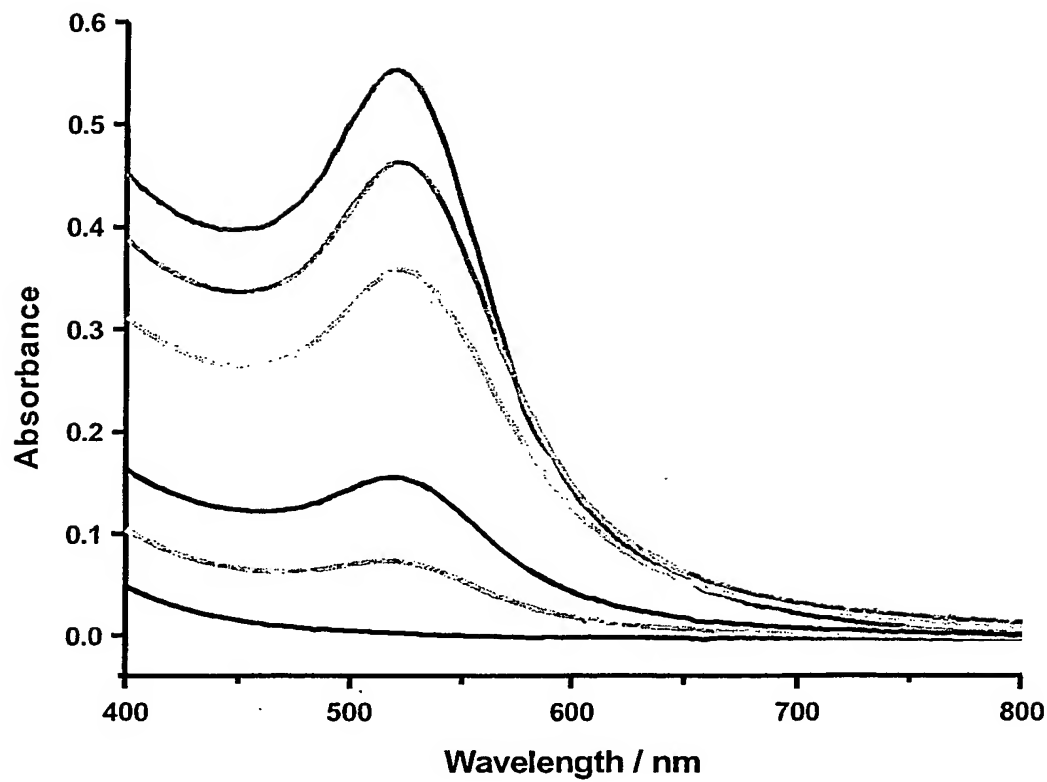


Figure 24



Rec'd PCT/PTO 31 MAY 2005

Figure 25

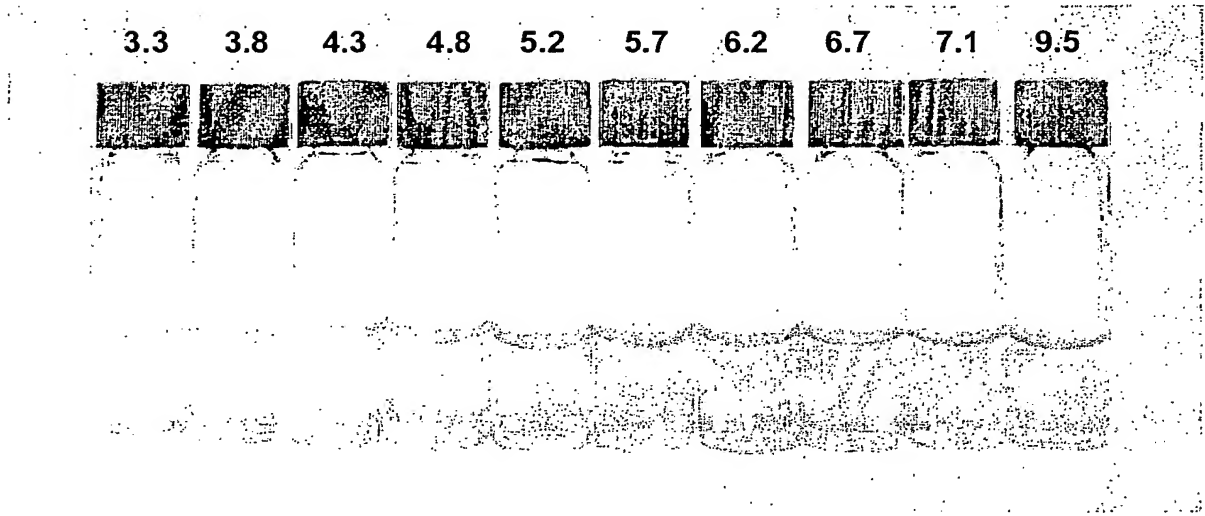


Figure 26

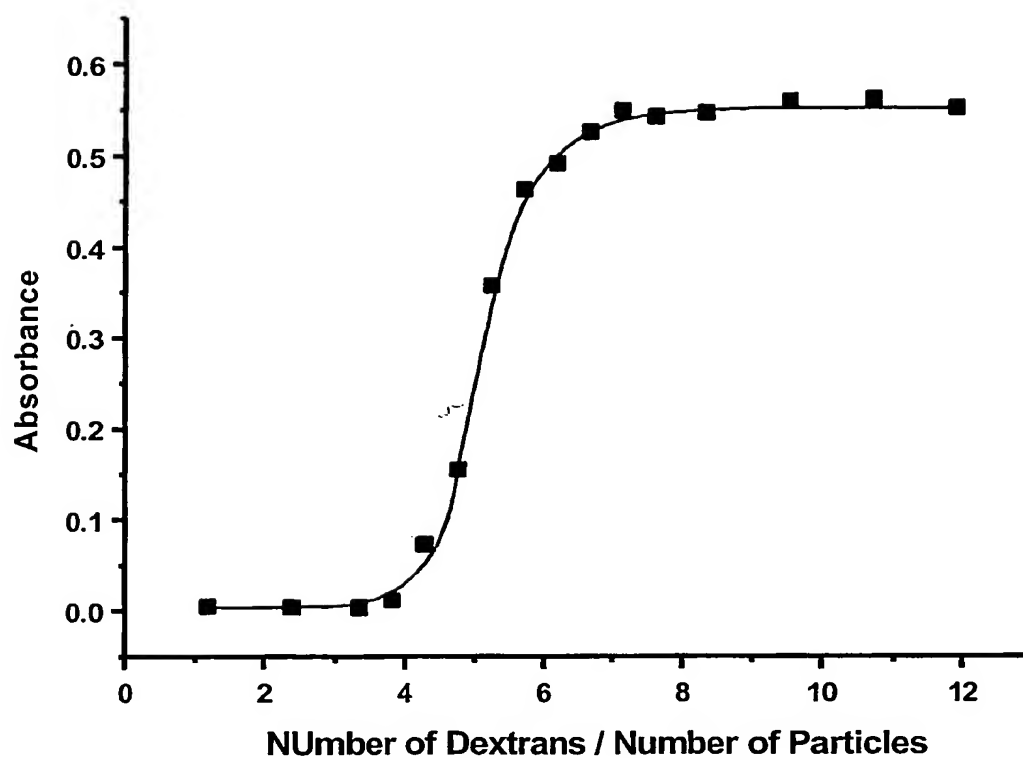


Figure 27

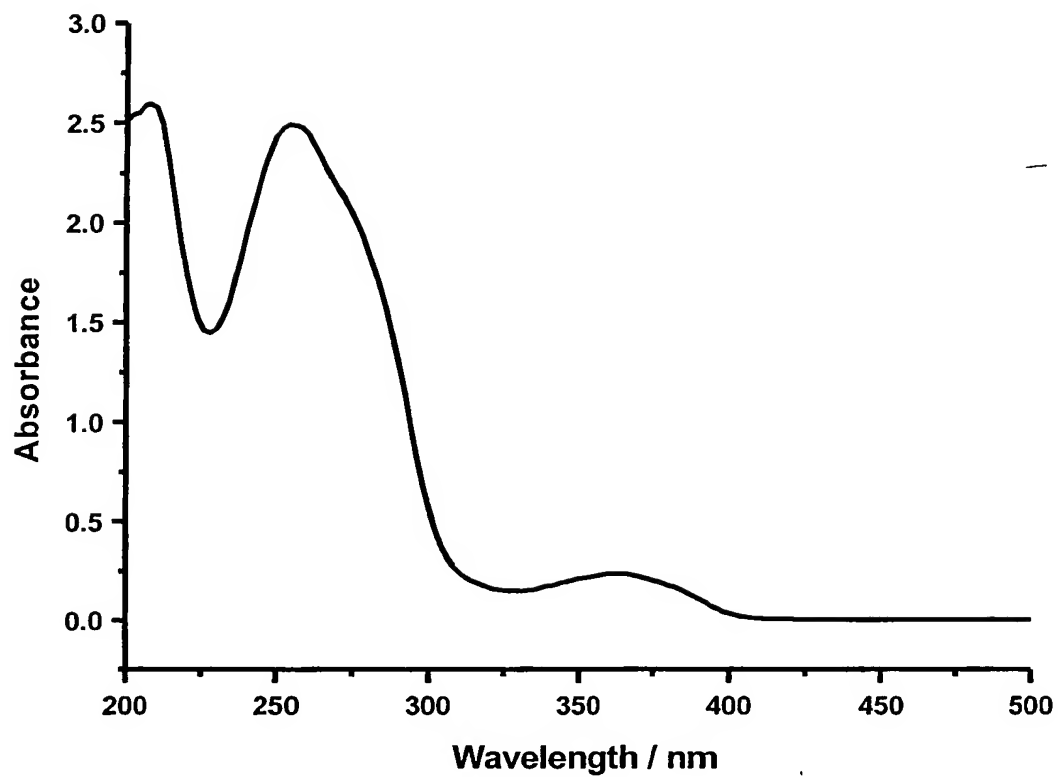


Figure 28

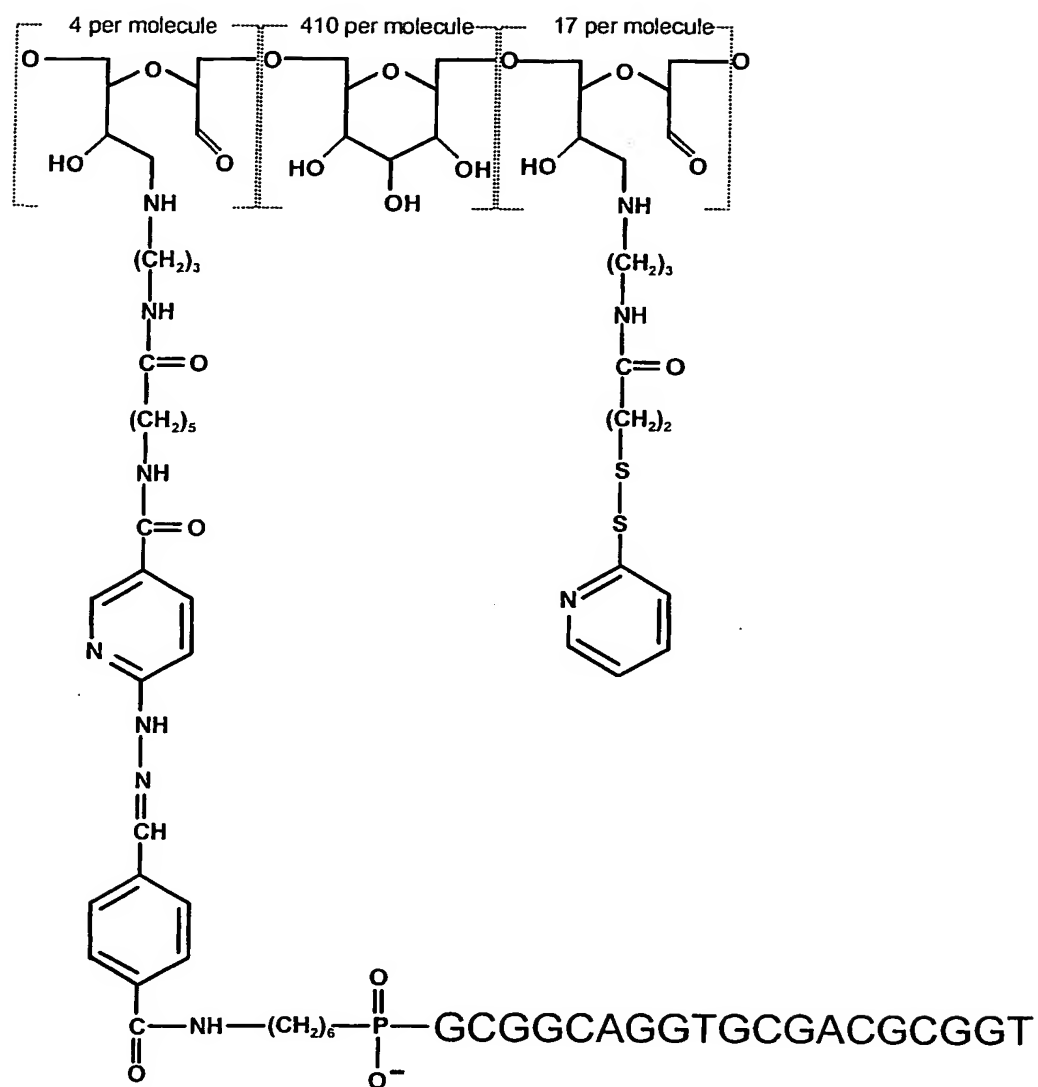


Figure 29

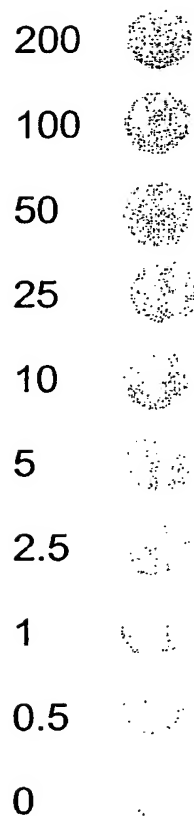


Figure 30

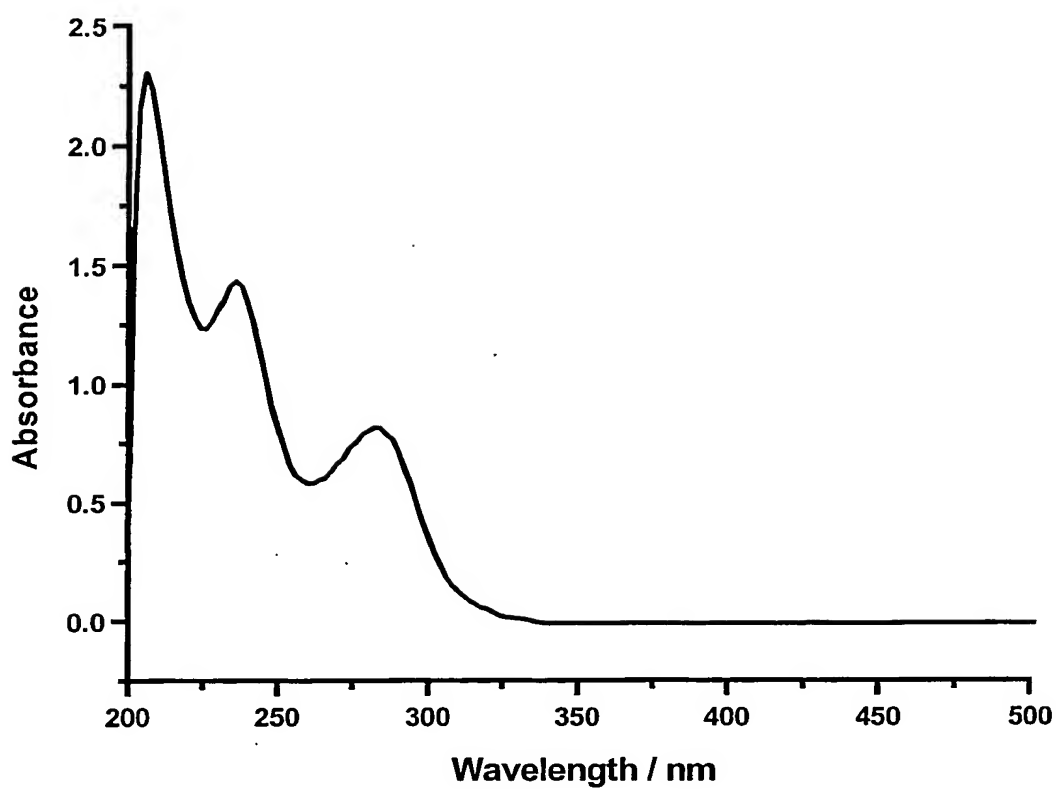
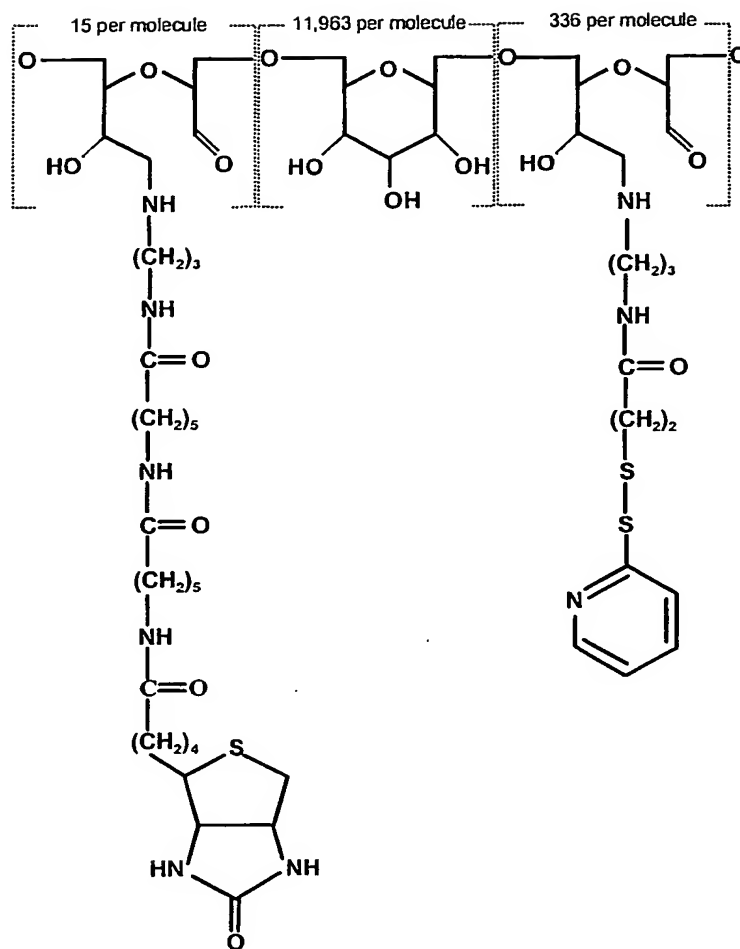


Figure 31



Rec'd PCT/PTO 31 MAY 2005

Figure 32

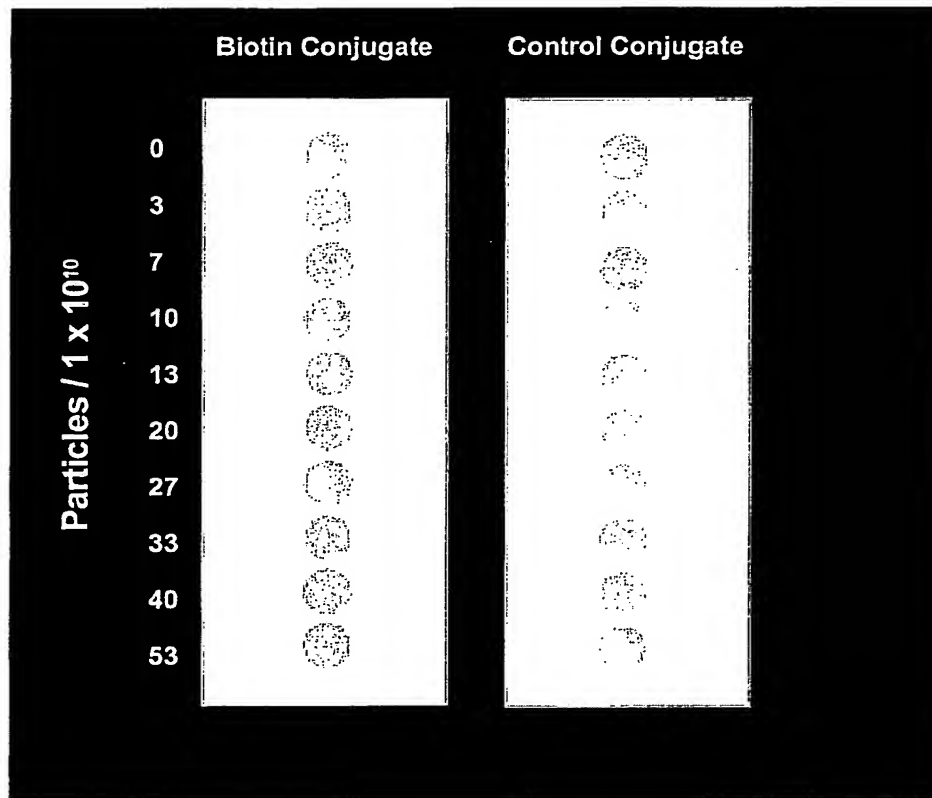


Figure 33

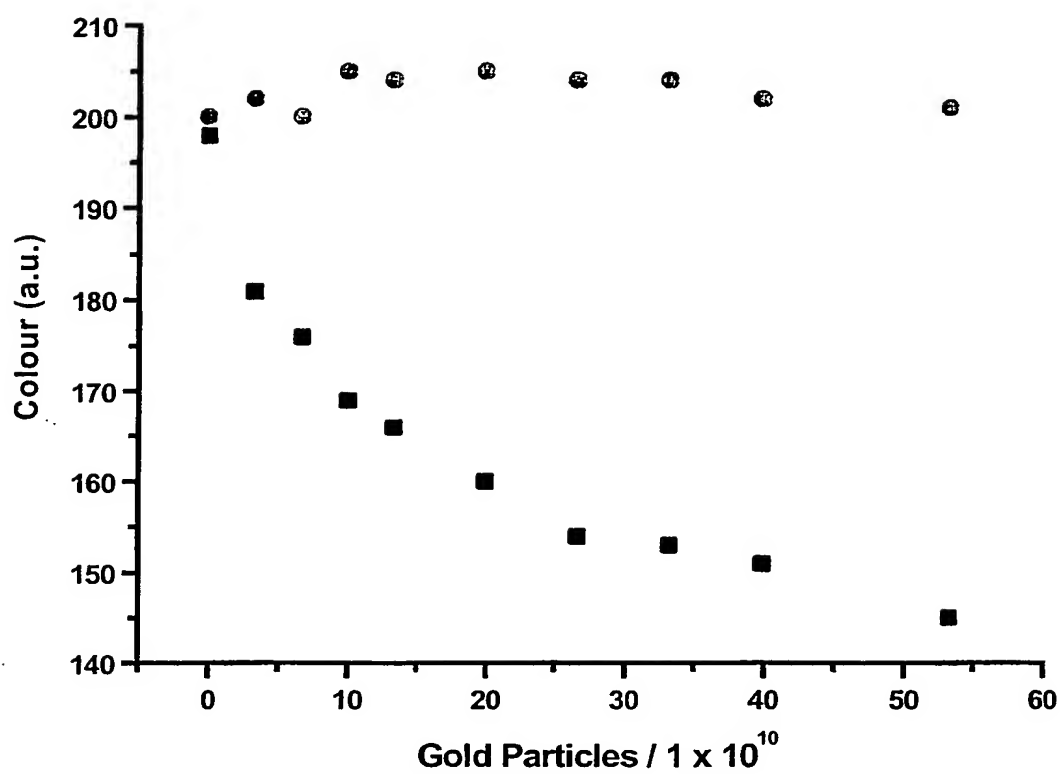
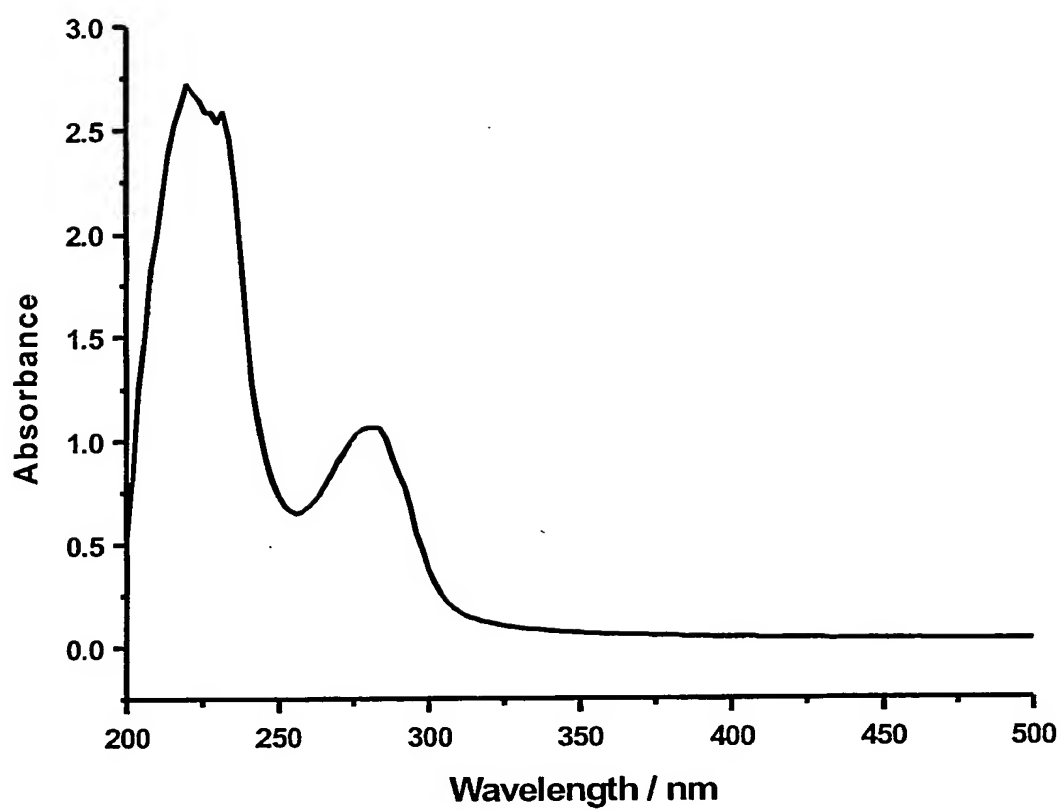


Figure 34



Rec'd PCT/PTO 31 MAY 2005

Figure 35

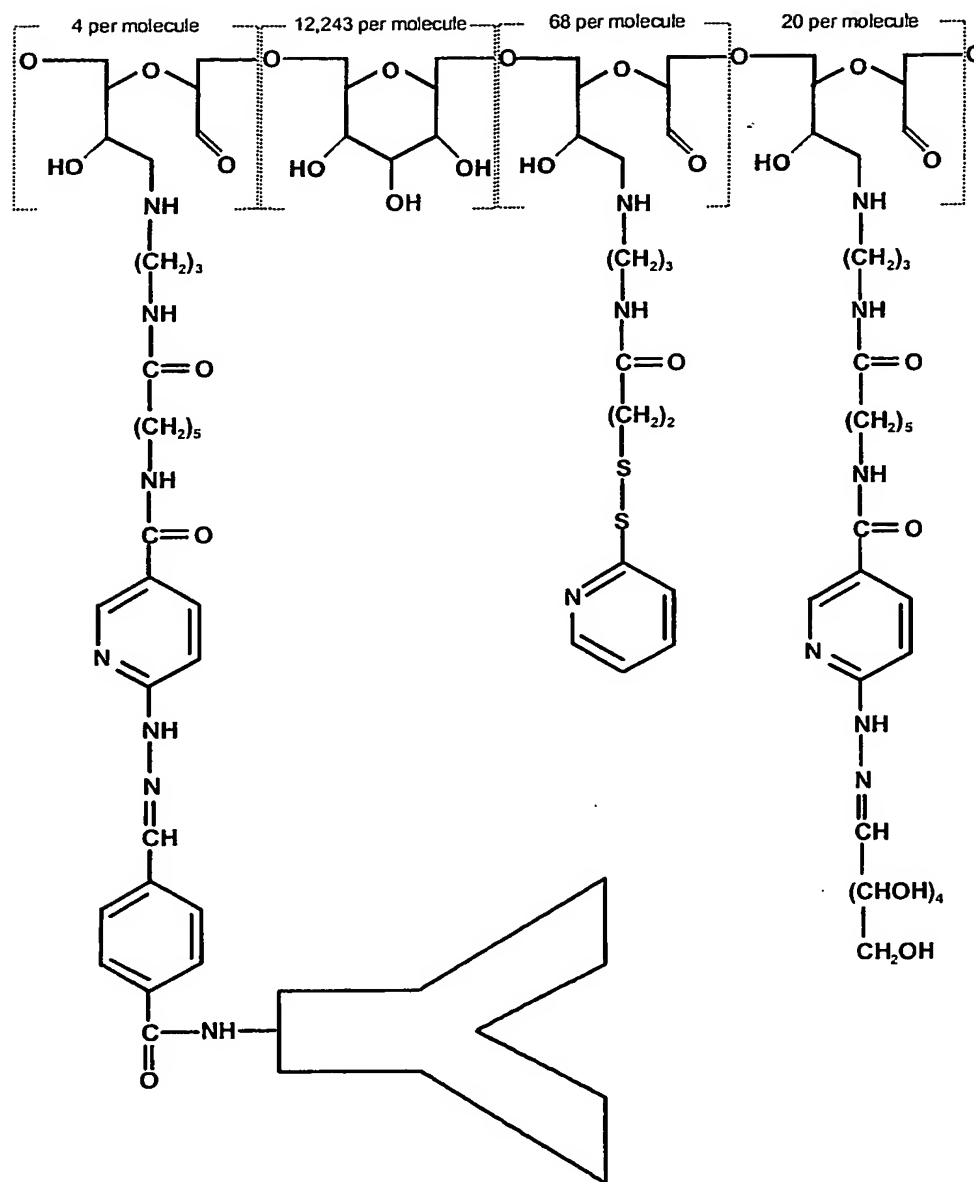


Figure 36

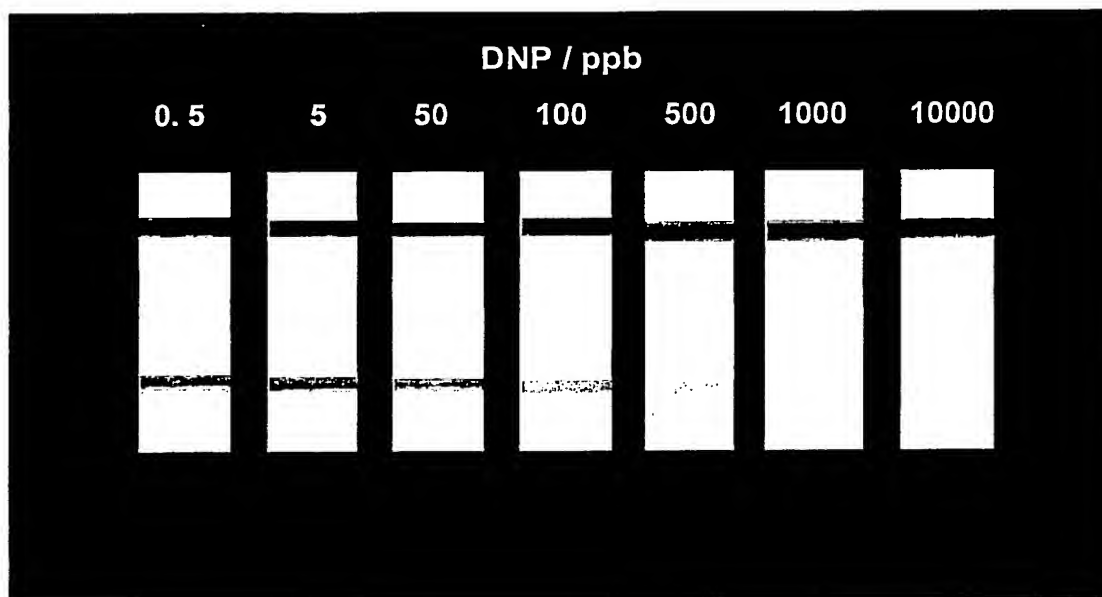


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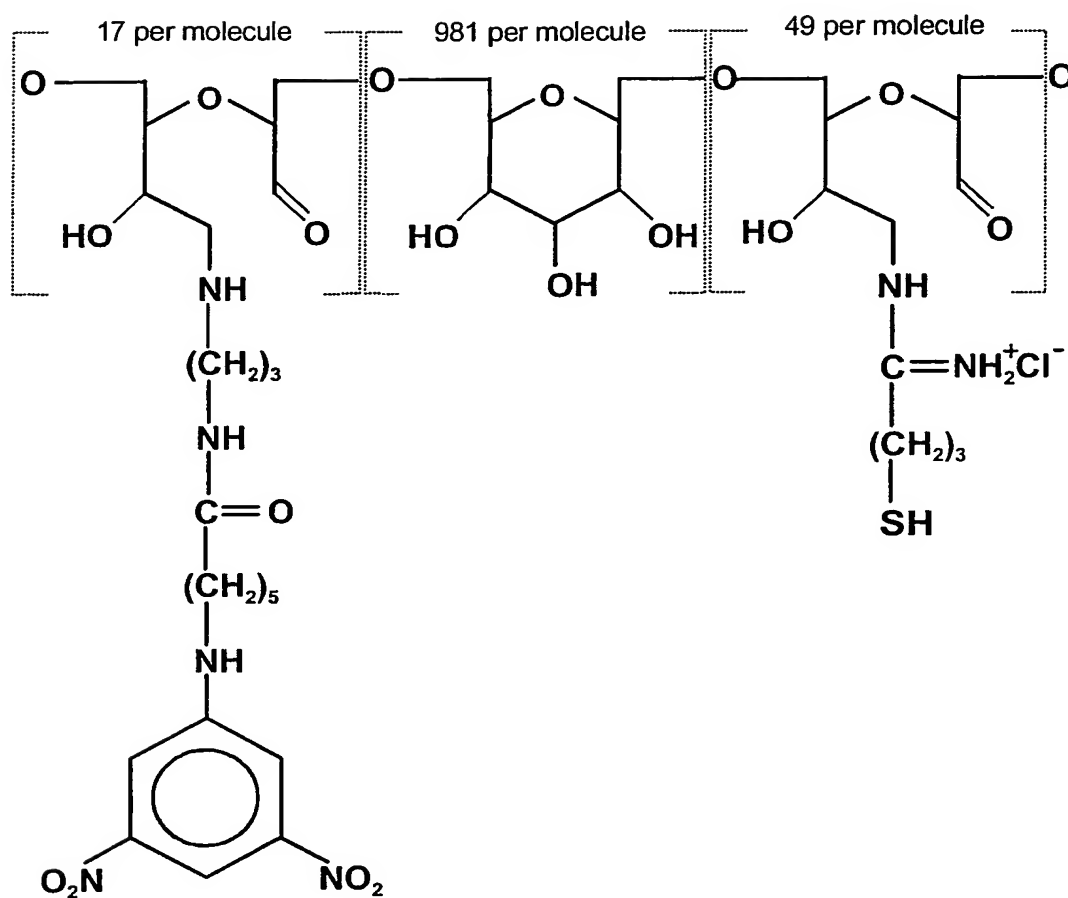


Figure 38

DNP / ppb

0

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10

50

100

500

1000

10000

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100000

